

S
Insect Control
Targhee

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November 1, 1928.



REPORT OF TARGHEE INSECT CONTROL WORK IN 1928.
(Dendroctonus monticolae)

MILK CREEK PROJECT

Area: Station Gulch, Milk Creek, Rammell Hollow, Packsaddle,
and Patterson Creek. 1500 acres.

Time of Treating: May 19 to June 7.

Cost: Wages	\$514.23
Kerosene	217.28
Subsistence supplies	260.76
Equipment	114.89
Hauling	24.29
Total	<u>\$1131.45</u>

Travel (F.O.)	57.21
Contributed time	<u>578.06</u>
Grand total	<u>\$1766.72</u>

No. trees treated: 2752

Cost per tree, all methods: \$0.642

Trees burned with kerosene: 2568 (93.65%)

Trees felled and burned: 184 (6.35%)

Man days spraying with kerosene and
burning: 108 $\frac{1}{2}$ (80.85%)

Man days felling and burning: 25 $\frac{1}{2}$ (19.15%)

No. trees treated to 1 gallon of kerosene: 2 $\frac{1}{2}$

Volume in feet B.M. sprayed and burned: 276,400

Volume in feet B.M. felled and burned: 12,860

Man days spotting: 42 $\frac{1}{2}$

On the basis of percentage of man days the division of costs would be \$0.556 per tree for spraying and burning and \$1.84 per tree for felling and burning.

If the 89 $\frac{1}{2}$ days of contributed time were replaced by labor at \$3.00 per day and the travel expense omitted, the cost per tree for the job would have been \$0.51 and the cost for only those of the trees that were sprayed and burned would have been \$0.4438 on the basis of 80.85% of the total time chargeable to control by this method. An additional allowance for kerosene, equipment and for closer supervision would raise the estimate for control work to 50¢ per tree.

In addition to the Milk Creek project, 317 Lodgepole pine trees were treated by the kerosene method in Rattlesnake Creek and Alex Draw in the Spencer district. This was done with contributed time and required 139 gallons of kerosene. Also several trees were cut and peeled by contributed time on the Porcupine district. A group of 8 or 10 trees on the Reclamation Road on that district were disposed of by sale, and 400 trees were treated on Milk Creek, mostly by contributed time, before the project was started.

Results: From investigations made during the summer, it is concluded that the treating method of spraying the standing trees with kerosene and burning them proved to be 90% effective. It is also believed that 95% of the bugs that escaped from treated trees came from the portion above the reach of the Meyer's 2 $\frac{1}{2}$ gallon compressed air pumps and that the remainder came from the bases of the trees where the thick bark affords the bugs greater protection from the heat.

Conclusions: Effectiveness of the kerosene treatment can be increased over 1928 results by: Increasing the amount of kerosene from 2 $\frac{1}{2}$ trees per gallon to about 1 $\frac{1}{2}$ trees per gallon; obtaining pressure pumps or pump nozzles that will send a fine stream rather than a spray from 40 to 50 feet up the tree trunks; and by providing close supervision of the spraying and burning for completeness of the job. After the tree trunk has been wet all over with the kerosene and the match struck and thrown at its base, the flame should be intensified and carried around and up the tree with the stream of kerosene from the pump, using a little extra fuel around the base where the bark is thick and also at the top to provide longer flames and increased heat for the portion of the trees above the reach of the pump.

When the kerosene is applied thoroughly and the flames carried over it with the pump stream, nothing more is gained by piling brush around the tree or leaning poles against it. The larvae and mature

beetles are cooked wherever the bark has been charred black except at the base of trees of large size, where a little extra kerosene suffices. The small green trees are thin-barked and take this treatment very readily. The bark on the large limby trees seems to have been dried out more by the larger number of galleries and most of them burn for their entire length above the treated portion.

The small amount of damage to adjacent un-infested green trees in groups or when the treating is in dense stands is far outweighed by the facility of this method. A very much greater loss is likely to be incurred by the probable partial treatment of an epidemic necessitated by the excessive amount of time it takes to fell, log, skid and burn all of the infested trees.

By the spraying method one man can treat a tree completely in a few minutes and the territory can be covered more quickly, which is a great advantage, due to the comparatively short period in the spring when there is no fire danger, when the snow has melted from around the trunks of the trees, and when the trees are dry and the wind low.

Spotting of the infested trees was done in advance of the treating crews. It was found that the tags were most noticeable when placed on the downhill side, or all on the same side of the trees if the country is level. Written descriptions of tree locations were found to be somewhat confusing and are not as good as a diagramatic map on a fairly large scale on which groups or single trees can be approximately located with land marks or some feature of topography.

While the pitching out of the beetles was indicated largely by heavy fresh pitch tubes and by absence of blueing or pinkness in the sapwood, numbers of trees were found that had apparently pitched out the bugs, but in which groups of full larval mines were found, especially at the base. Numbers of trees were also found in which the beetles were pitched out only on one side.

The kerosene was hauled by team to central locations in 50 gallon drums on a "lizard" or sled constructed from two crooked saplings for runners, bolted with cross pieces. (Picture enclosed). This should be supplemented by packhorses to carry smaller containers of kerosene to the treating crews.

(Sgd.) S. W. STODDARD.

Forest Supervisor.

June 29, 1928.

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Insect Control
Targhee

Forest Supervisor,

St. Anthony, Idaho.

Dear Mr. Stoddard:

Enclosed is a copy of District Forester Morrell's letter of June 4.

We will want a very complete report of your insect control work this spring in order that the results will be available for use in future control projects in lodgepole pine. The kind of trees which are successfully treated with oil alone and the kind which need brush piled around and poles leaned up against should be carefully described. Detailed statement of costs should, of course, be given.

Very sincerely yours,

B. B. Morse

Encl.

Assistant District Forester.

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Insect Control

June 4, 1928.

District Forester,
Ogden, Utah.

Dear Mr. Rutledge:

Reference is made to the note on the bottom of Page 1, "Daily News - Intermountain District," May 26, 1928.

District 1 has tried some experiments in burning trees standing, but did not succeed in getting satisfactory results with oil alone, though it was possible to get the flame well up the tree by the use of a spray pump.

The conclusion was reached that burning by spraying a tree with oil does not generate sufficient heat to kill the insect larvae. In order to get a sufficient degree of heat all the way up the tree it was necessary to build a fire around the base of the tree and carry it up the tree by standing dry poles on end. The oil is of some assistance in getting the fire started and in carrying the flame up the tree, but Mr. White and Mr. Evenden pretty definitely concluded that burning with the oil alone without supplying fuel at the base of the tree did not generate sufficiently continuous heat to kill the bugs.

The men in this District will be very glad to get any further information that you are able to furnish regarding the experiment.

Very sincerely yours,

FRED MORRELL, District Forester,

By

Fred Morrell

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DAILY NEWS - INTERMOUNTAIN DISTRICT

Ogden, Utah - May 26, 1928

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MAY 28 1928
P. R.

IDAHO AND WEISER RANGER MEETING

At the range management meeting of the Idaho and Weiser Forests, all the rangers and deputies prepared papers which showed a real study of their subjects.

Judging the per cent of utilization and interpreting the term "proper utilization" developed a great variety of estimates. It showed the difficulty of teaching by lectures and discussion, and emphasized the need for more training by practice. A much better conception of the term "utilization" resulted from this field work. All present seemed to desire more standardization in grazing terms and more uniformity in applying these terms.

A test in the identification of 75 range plants created much interest. Although many of the specimens were not in bloom, a few were purposely selected because they were unusual specimens. Some of the men identified all but five plants and one deputy identified all but four. It was encouraging to see the number of plants known to those present.

ON TARGHEE BUGS

Assistant District Forester C. B. Morse has returned from the Targhee where he spent some time in connection with insect infestation work. He reports there are two infestations on different parts of the forest - one on the west of the railroad and one west of Teton Basin. The infestation west of the main line of the railroad was pretty bad in 1926, but apparently this is on the decline and no work will be done on it. The infestation on the west side of Teton Basin is in a continuous body of lodgepole, extending over the remainder of that part of the Targhee and the Teton and Wyoming Forests, and can spread into our most valuable stands of lodgepole. The Targhee is attempting to hit this hard enough so that it will be controlled.

A new method of treatment has been developed on the Targhee by which a 2½ gallon Myers compressed air sprayer pump, No. 1296, is being used for spraying coal oil onto the boles of the infested trees standing. The coal oil is then lighted and sufficient heat is created to kill the larvae under the bark. It appears now that the cost of treatment will be reduced about 50% by this method.

NEVADA AND UTAH FOREST HIGHWAY PROGRAMS APPROVED

The Forester has advised that the Acting Secretary of Agriculture has approved the Nevada and Utah Forest Highway programs. These cover the construction of the Aspen Grove section of the Alpine Scenic Highway and the Fruitland section of the Heber-Fruitland road in Utah, and the Lake Tahoe road in Nevada.

"Hello, old man, where have you been?"

"Just got back from a camping trip."

"Roughing it, eh."

"You bet! Why one day our portable dynamo went on the bum, and we had no hot water, heat, electric lights, ice or radio for almost two hours."

--Life